

CLAIMS:

1. A method for machining a fiber cement workpiece comprising:

operating a machining tool to machine a fiber cement workpiece to generate chips out of the workpiece, wherein the machining tool comprises a cutting tool insert comprising a superabrasive material having an average grain size of less than or equal to about 10 μm .
2. The method of claim 1, wherein the superabrasive material is PCD or PCBN.
3. The method of claim 1, wherein the cutting tool insert is formed by HP/HT.
4. The method of claim 1, wherein the chips are continuous or semi-continuous.
5. The method of claim 1, wherein the fiber cement workpiece is rotated about an axis in order to make continuous contact with the machining tool.
6. The method of claim 1, wherein the machining tool rotates around the fiber cement workpiece during machining.
7. A cutting tool insert for use in connection with a fiber cement machining tool comprising a superabrasive blank having an average grain size less than or equal to about 10 μm .
8. The cutting tool insert of claim 7, wherein the superabrasive blank comprises PCD or PCBN.
9. The cutting tool insert of claim 7, wherein the superabrasive blank is formed with HP/HT.
10. The cutting tool insert of claim 7, further comprising a substrate, wherein the superabrasive is bonded to the substrate.
11. A cutting tool insert of claim 7, wherein the surface of the superabrasive blank is laser-etched at selected positions.
12. A cutting tool insert of claim 7, wherein the superabrasive blank is brazed into the cutting tool insert.

13. A cutting tool insert of claim 7, wherein the tool insert contains a pocket for receiving the superabrasive blank.
14. A machining tool for cutting fiber cement parts comprising a cutting tool insert, wherein the insert comprises a superabrasive blank having an average grain size less than or equal to about 10 μ m.
15. The machining tool of claim 14, wherein the superabrasive blank comprises PCD or PCBN.
16. The machining tool of claim 14, where the superabrasive blank is processed by HP/HT.
17. The machining tool of claim 14, where the superabrasive blank includes a bonding matrix of about 5% to 35% by volume of the blank.
18. The machining tool of claim 14, wherein the tool is a turning tool.
19. The machining tool of claim 14, wherein the tool is a milling tool.
20. The machining tool of claim 14, wherein a relieved tooth formed out of the blank is mounted onto the machining tool.
21. The machining tool of claim 20, further including an array of relieved tips.
22. A fiber cement workpiece of desired dimensions and geometry, wherein the workpiece is machined into a desired dimension and geometry and wherein the workpiece exhibits no tearing on its surface after such machining, wherein the machining comprises:

operating a machining tool to machine a fiber cement workpiece to generate chips out of the workpiece, wherein the machining tool comprises a cutting tool insert comprising a superabrasive material having an average grain size of less than or equal to about 10 μ m.
23. The fiber cement workpiece of claim 22, wherein the superabrasive material is PCD or PCBN.